UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY DOCKET NO.
08/463,904	06/05/95	PHIPPS	

F3M1/0730

ROBERT G. MUKAI
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER	
BOCKELMAN, M	

ART UNIT	PAPER NUMBER
3306	14

DATE MAILED: 07/30/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☑ Responsive to communication(s) filed on 6-25-97

☑ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☑ Claim(s) 1-17 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.
☐ Claim(s) _____ is/are allowed.
☑ Claim(s) 1-17 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of Reference Cited, PTO-892
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
☐ Interview Summary, PTO-413
☐ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. The examiner notes that the rejection of claims 1-17 as being obvious to Weaver '034 in view of Sibalis '892 or Levy et al was misstated and should have been Weaver et al *or alternatively* Sibalis '892 each further in view of Levy. Hence, to correct the error, the examiner withdraws finality of the last office action and applies the following.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver '034 or alternatively Sibalis '892 each reference further in view of Levy et '802.

Weaver '034 teaches the use of electroporation as a method of delivering medicaments to a patient. Sibalis '892 teaches the use of electroosmosis to deliver drugs to a patient. Applicant differs from the base references in reciting the use of Fentanyl and Sufentanil in specific concentrations as the drugs to be delivered. The examiner considers the use of Fentanyl and Sufentanil as the medicaments to be delivered as obvious in view of Levy since it was desirable to deliver these drugs transdermally for their narcotic properties. Applicant's specification relies upon iontophoretic embodiment's to establish criticality for the concentrations (i.e.a high enough concentration so that the flux is independent upon the concentration during iontophoretic delivery.) Applicant demonstrates no correlation between the recited concentrations and the electroporation/electrosmosis methods covered by the "electrotransport" method. Therefore to employ these concentrations using the electroporation and electrosmosis methods is merely a design choice. While Sibalis teaches the use of adhesives and hydrophillic gels (hydrogels). Weaver et al is silent to the use of hydrogels and adhesives but the examiner notes these are conventional materials for holding drugs and devices against the patient's skin.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phipps et al '739 in view of Phipps et al '894.

Phipps et al '739 teaches the delivery of Fentanyl and Sufentanil (column 13 line 50) in hydrogels (see last line of abstract) which may be adhesive (column 6 lines 18-20). Applicant differs in reciting specific ranges of concentration for the medicaments that render the drug flux

independent upon the concentration of the medicament. Phipps et al USPN 5,125,894 refers to the Padmanabhan article (a copy of which applicant has supplied in the response of 6-9-97) which notes that it known to provide a sufficient drug concentration in the reservoir, above a threshold level, to maintain a linear relationship between current and drug flux. To have tested and determined the threshold levels for fentanyl and sufentanil would have been an obvious optimization of parameters in view of the teachings of the Phipps references (and Padmanabhan) teachings.

Response to Arguments

5. Applicant's arguments filed June 9,1997 have been fully considered but they are not persuasive. In regard to applicant's comments regarding the "safety" associated with using the potent narcotics and that one of ordinary skill in the art would not have used the claimed concentrations because the passive delivery would be uncontrollable the examiner notes that applicant provides neither an upper limit on their claimed concentration nor any particular element for restricting passive flow out of the reservoir in the claimed invention. It would appear that the claimed invention lacks utility for a large portion of its scope based upon applicant's arguments. The examiner does not give weight to applicant's arguments of "inoperativeness" in the prior art since the claimed invention covers the same "inoperative" invention.

Contrary to the assertion by Phipps in the 1.132 affidavit, the examiner considers the teachings of Phipps and Padmanabhan to demonstrate that there is a threshold value of

concentration that must be overcome before observing linearity in current drug concentration relationships. The mere optimization of parameters has long been held as obvious in court decisions. It is the examiner's opinion that the references provide guidance towards such an end. Additionally, the examiner notes that it has long been known that it is important to keep track of dosages delivered to a patient and that one of ordinary skill has known that outside the linear region it is difficult to maintain the desired delivered dosage. Therefore "depleting" the reservoir was not always desired by inventors of iontophoretic devices. Frequently, multiple dosage devices are used which delivers portions of the total quantity.

In regards to the rejections of Weaver and Sibalis as primary references, the examiner notes that applicant has taken great liberty by demonstrating drug concentration relationships to an iontophoretic system and extrapolating to "electrotransport" that is to be given its broadest meaning that includes electrically induced or electrically enhanced (see page 2 of the application) methods in which applicant provides no such demonstration of any criticality for the recited drug concentrations in the claims. Therefor to simply use these concentrations in a pure electroporation method or electroosmosis method is obvious to one of ordinary skill since the methods are unrelated and one of ordinary skill can predict results as well as applicant.

The examiner cannot find applicant's "Appendix B" in the response.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Bockelman whose telephone number is (703) 308-2112.

Mark Bockelman

July 30, 1997